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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

LIU, SHUWANG

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/629,862

Applicant(s)

PERINO, DONALD V.

Examiner

Shuwang Liu

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-9,17,22,23,28 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 5-8,10-16,18-21,24-27 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 12 June 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6-9, 17, 22, 23, 28 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Dillon et al. (US 5,663,661, see paper #4).

As shown in figures 1 and 6, Dillon et al. discloses a slave device for use in a master-slave system, comprising:

(1) regarding claims 1 and 17:

a clock node (for example, CLK4 for 615) to receive an externally-provided clock signal (630);

a phase-to-master node (for example, CLKTOMASTERB) to receive a phase-to-master phase signal (CLK1 on 670); and

a phase-from-master node (for example, CLKFROMMASTERB) to receive a

phase-from-master phase signal (see figure 6), wherein an interface of the slave device (1, 2,... or 615) includes the three nodes above.

(2) regarding claims 6 and 7:

wherein said slave device processes a single-ended phase-to-master phase signal and phase-from-master phase signal (column 8, line 35-column 9, line 24).

(3) regarding claim 8:

a clock signal generator (130 or 630) configured to produce a clock signal (CLK4);

a phase signal generator (630, 640 and 680) configured to produce a phase signal (CLK1 on 670);

a clock line (CLK4, Rs4, ...) connected to the clock signal generator to carry the clock signal;

a phase line (670 and 643) connected to the phase signal generator to carry the phase signal, the phase line (670) including a phase-to-master path (670) to carry a phase-to-master phase signal and a phase-from-master path (643) to carry a phase-from-master phase signal;

a master device (110 or 610) connected to the clock line and the phase line;

a data bus connected (170 or 611) to the master device; and

a slave device (1, 2, or 615) connected to the data bus, the clock line and the phase line, the slave device configured to process data on the data bus in response to the clock signal and the phase signal (column 8, line 35-column 9, line 24).

(4) regarding claim 9:

wherein the phase signal generator including a divider-by-N circuit (640 and 680) to produce the phase signal from the clock signal.

(5) regarding claim 22:

generating said phase signal from said clock signal (630).

(6) regarding claim 23:

wherein generating the phase signal as a divided (640 and 680) clock signal.

(7) regarding claims 28, 31 and 32:

wherein the master device is a memory controller and the slave device is a memory device (column 3, lines 48-67).

(8) regarding claim 30:

wherein the slave device is an integrated circuit (column 3, lines 48-67).

Allowable Subject Matter

4. Claims 2-5, 10-16, 18-21, 24-27 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or fairly suggest that the slave device includes a delay-locked-loop as recited in claims.

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (703) 308-9556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (703) 305-4714.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Shuwang Liu
Primary Examiner
Art Unit 2634

September 2, 2003